

CLAIMS

1. An in vivo camera system comprising:
 - an imager having a variable frame capture rate for producing frames;
 - 5 at least one sensor for measuring a physical property relatable to the motion of said camera system;
 - a data processor in communication with said sensor for determining a frame capture rate in response to output of said sensor; and
 - a controller for providing said determined frame capture rate to said
 - 10 imager.
2. A system according to claim 1, wherein said sensor is an accelerometer.
3. A system according to claim 2, and including an integrator in
15 communication with said accelerometer for generating the velocity of said in vivo camera system.
4. A system according to claim 1, wherein said sensor is a pressure sensor.
- 20 5. A system according to claim 1, wherein said sensor is an induction coil and said in vivo camera system is moving in a magnetic field.
6. A system according to claim 1, wherein said sensor is an ultrasound transducer.
- 25 7. An in vivo camera system comprising:
 - an imager having a variable frame capture rate for producing frames;
 - a storage device for storing frames captured by said imager;
 - an image processor for calculating the required frame capture rate
 - 30 from at least two frames; and
 - a controller for providing said calculated frame capture rate to said imager.

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8. A display system for displaying the output of an in vivo camera system, the display system comprising:

5 a frame storage unit for storing frames of output of said camera system;

an image processor for correlating frames of said output to determine the extent of their similarity and for generating a frame display rate therefrom, wherein said frame display rate is slower when said frames are generally different and faster when said frames are generally similar; and

10 a display unit for displaying said frames received from said frame storage at said frame display rate.

9. A display system according to claim 8 wherein said at least two frames are two consecutive frames.

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10. A display system according to claim 8 wherein said at least two frames are two non- consecutive frames.

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11. A display system according to claim 8 further comprising a controller in communication with said frame storage and said image processor, wherein said controller varies said display rate of said display unit.

12. A system according to claim 1 further comprising a display system comprising:

25 a frame storage unit for storing at least two frames of output of said camera system;

an image processor for correlating at least two frames of said output to determine the extent of their similarity and for generating a frame display rate correlated with said similarity, wherein said frame display rate is slower when said frames are generally different and faster when said frames are generally similar; and

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a display unit for displaying said frames received from said frame

storage at said frame display rate.

13. An in vivo camera system according to claim 7 further comprising a display system comprising:

5 a frame storage unit for storing at least two frames of output of said camera system;

an image processor for correlating at least two frames of said output to determine the extent of their similarity and for generating a frame display rate correlated with said similarity, wherein said frame display rate is slower when said frames are generally different and faster when said frames are generally similar; and

a display unit for displaying said frames received from said frame storage at said frame display rate.

14. A method for varying the frame capture rate of a series of frames generated by an in vivo camera system, the system comprising an imager, the method comprising the steps of:

storing said frames in a storage device;

correlating changes in the details of at least two frames;

20 changing said frame capture rate to a predetermined frame capture rate according to the degree of change between said at least two frames; and

communicating said required frame capture rate to said imager.

15. A method according to claim 14 wherein said at least two frames are consecutive frames.

16. A method according to claim 14 wherein said at least two frames are non-consecutive frames.

17. A method for varying the frame capture rate of a series of frames generated by an in vivo camera system, the system comprising an imager, the method

comprising the steps of:

measuring a physical quantity experienced by said camera system;
converting said physical quantity to a velocity of said camera system;
correlating said velocity with a predetermined frame capture rate; and
communicating said predetermined capture rate to said imager.

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18. A method according to claim 17, wherein the step of measuring includes the steps of measuring acceleration and generating velocity data from said acceleration data.

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19. A method according to claim 17, wherein the step of measuring includes the step of measuring acceleration.

20. A method according to claim 17, wherein the step of measuring includes the step of measuring pressure.

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21. A method according to claim 17, wherein the step of measuring includes the step of measuring induced current when the camera system is moving in a magnetic field.

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22. A method according to claim 17, wherein the step of measuring includes the step of measuring the motion of said camera system with an ultrasound transducer.

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23. A method for varying the frame display rate of a series of frames generated by an in vivo camera system, the method comprising the steps of:
storing said frames in a storage device;
correlating changes in the details of at least two frames; and
communicating said required frame display rate to said storage device
and a display unit.

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24. A method according to claim 23 wherein said at least two frames are

consecutive frames.

25. A method according to claim 23 wherein said at least two frames are non-consecutive frames.

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26. A method according to claim 23 wherein said step of communicating said required frame rate comprises the step of requiring the display of at least one frame a predetermined number of times.

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27. A method according to claim 23 wherein said step of communicating said required frame rate comprises the step of eliminating the display of at least one frame.

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28. An in vivo camera system according to claim 1, and also including an antenna array, said array receiving data from said sensor and communicating said data to said data processor.
